

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019003**Date Inspected:** 29-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Li Ping, Mr. Sheng Qing Quan

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication.

OBG Bay 14

Segments 13AW

ZPMC presented QA personnel with "Notification of Witness Inspection" document number 07981 that stated ZPMC was requesting Caltrans to perform visual and ultrasonic (UT) inspections of OBG segment 13AE stiffener plate complete joint penetration welds as shown on drawings SEG3013B (item 4) and SEG3013C (item 3) in Bay 14. This QA Inspector observed welds SEG3013B-191,198 both are visually rejected. Weld SEG3013B-191 has underfill on both ends of the weld and weld SEG3013B-198 has underfill on one end of the weld and the full length of the backing bar has been partially removed by the air carbon arc process and it has not been ground to remove the oxide surface. This QA Inspector did not perform ultrasonic inspections of these two welds due to the visual rejections. This QA Inspector showed ZPMC CWI Mr. Li Ping photographs of the visual rejected welds and he indicated that dayshift workers will need to perform repairs of these welds.

This QA Inspector performed random visual and ultrasonic (UT) inspections of the following welds and items

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observed on this date appeared to generally comply with applicable contract documents:

Item 4: welds SEG3013B-023,029,035,041

Item 3: welds SEG3013C-006,012,018,024,042

Other Caltrans QA Inspectors performed UT inspections of similar welds as listed on the “Notification of Witness Inspection” document. Items observed by this QA Inspector appeared to comply with AWS D1.5 UT requirements. For additional information on these inspections see this QA Inspector’s TL6027 Ultrasonic Test Report.

Segments 13CE

ZPMC presented QA personnel with “Notification of Witness Inspection” document number 07980 that stated ZPMC was requesting Caltrans to perform visual and ultrasonic (UT) inspections of OBG segment 13CE stiffener plate complete joint penetration welds as shown on drawing SEG3011B (item 1) in Bay 14. This QA Inspector observed welds SEG3011B-070, 074, 078, 082 and 086 were visually rejectable. This QA Inspector informed ZPMC CWI Mr. Sheng Qing Quan that several of these welds appeared to be visually rejected and Mr. Sheng Qing Quan visually inspected then marked welds SEG3011B-070, 074, 078, 082, 086, 090, 094, 098, 102, 106, 110, 114, 118, 122, 126, 139, 141 as requiring additional welding. Several of these welds appeared to have been ground on the top ends of the welds, which resulted in the weld material not being flush with the top surface of the stiffener plate. See the photographs below for additional information. This QA Inspector did not perform ultrasonic inspections of these welds due to the visual rejections.

This QA Inspector performed random visual and ultrasonic (UT) inspections of the following welds and items observed on this date appeared to generally comply with applicable contract documents:

Item 1: welds SEG3011B-066, 070

ZPMC presented QA personnel with “Notification of Witness Inspection” document number 07980 that stated ZPMC was requesting Caltrans to perform visual and ultrasonic (UT) inspections of OBG segment 13CE stiffener plate complete joint penetration welds as shown on drawing and SEG3011C (item 2) in Bay 14. This QA Inspector observed weld SEG3011C-140 is shown on the drawing as being a fillet weld that joins a stiffener plate to bottom plate. This QA Inspector did not perform ultrasonic inspections of that weld.

This QA Inspector performed random visual and ultrasonic (UT) inspections of the following weld and items observed on this date appeared to generally comply with applicable contract documents:

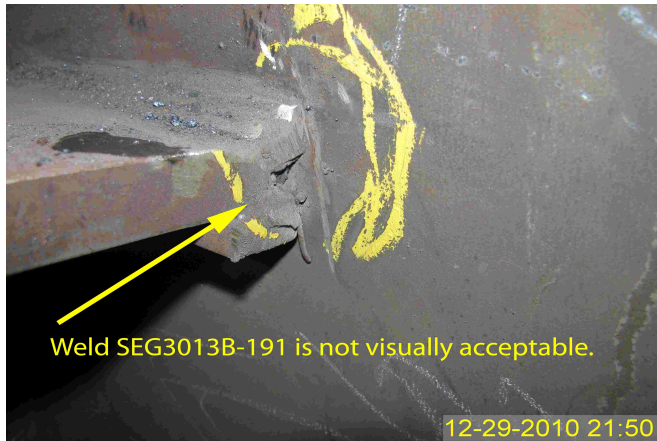
Item 2: weld SEG3011C-138

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### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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